STATE OF WASHINGTON
INDEPENDENT SCIENCE PANEL
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December 26, 2000

The Honorable Gary Locke
Governor of Washington
PO Box 40002
Olympia, WA 98504-0002

The Honorable Frank Chopp
Co-Speaker of the House
324 15th Avenue East, Suite 103
Seattle, WA 98112

The Honorable Sid Snyder
Majority Leader of the Senate
PO Box 40482
Olympia, WA 98504-0482

The Honorable Clyde Ballard
Co-Speaker of the House
PO Box 40600
Olympia, WA 98504-0600

Dear Governor Locke, Senator Snyder, and Representatives Chopp and Ballard:

The Independent Science Panel (Panel) was created by the Legislature in 1998 to provide scientific oversight of Washington's salmon, steelhead, and trout recovery efforts. Per RCW 77.85.040, the Legislature required that the Panel submit a report on salmon monitoring to the Governor and the Legislature by December 31, 2000. This letter and the enclosed report are being sent to you in fulfillment of that obligation.

The Legislation asked the Panel to make recommendations on the following:

- Standardized monitoring indicators and data quality guidelines for use by entities involved in habitat projects and salmon recovery activities across the state,
- Criteria for the systematic and periodic evaluation of monitoring data in order for the state to be able to answer critical questions about the effectiveness of the state's salmon recovery efforts,
- The level of effort needed to sustain monitoring of salmon projects and other recovery efforts, and
- Any other recommendations on monitoring deemed important by the Panel.

We consider the development and implementation of a comprehensive statewide monitoring program to be of central importance to salmon recovery in Washington State. If adaptive management is to be credibly and successfully applied, it will need the strong scientific backbone that a comprehensive monitoring program can provide.

As we wrote in our comments on the Statewide Strategy to Recover Salmon (Strategy) in May of this year, most of the concepts and steps outlined in the Strategy's monitoring chapter were scientifically sound and provide a reasonable foundation for further development. In the current report, we elaborate on the critical elements needed for developing a comprehensive statewide recovery monitoring program.

We believe that the principal purpose of monitoring is to help make decisions by reducing uncertainty and tracking progress towards recovery. Many programs already monitor indicators relevant to salmon, but the efforts are largely uncoordinated or unlinked among programs, have different objectives, use different indicators, and lack support for sharing data. Existing programs lack shared statistical designs to address specific issues raised by listing of species under the Endangered Species Act (ESA).

We recommend that a comprehensive statewide monitoring program be developed with the following eight characteristics to be scientifically credible:

- Goals, objectives, and questions that need to be addressed must be clearly articulated.
- Statistical designs need to be appropriate to the objectives.
- Indicators and variables need to be defined by objectives and the appropriate geographical, temporal, biological scales.
- Sampling protocols, consistent with design needs, need to be standardized to allow comparison among locations, times, or programs.
- Procedures need to be developed to ensure quality assurance and quality control of all data used to monitor salmon recovery and recovery actions.
- Data management systems need to allow easy access, sharing, and coordination among different collectors and users.
- Funding needs to be stable and adequate. Monitoring will depend on the degree to which decision-makers wish to be certain that management actions are having an anticipated response.
- Decision support systems need to help integrate monitoring information into decision-making.

Based on our review, we believe that to provide a scientifically sound adaptive management framework, existing programs either need to be: (1) significantly changed, coordinated, and supplemented with new program elements to achieve a comprehensive monitoring program, or (2) a new program must be developed that adequately treats recovery actions as a large, consolidated experiment. Both of these will require increased and stable levels of funding and policy commitments.

We are encouraged by the state's interest in monitoring. We hope the enclosed report will be of value as issues associated with salmon recovery monitoring are debated in the days and months to come.
The challenge of salmon recovery remains enormous. Nothing about it is easy. However, establishing long-term systems that allow us to monitor our progress, detect our successes, and learn from our mistakes will help us all be more effective and confident in our decisions affecting the uncertain world we and the salmon call home.

If any aspects of these recommendations need clarification please contact us.

Sincerely,

Kenneth P. Currens, Chair
Independent Science Panel

Enclosure

cc: Senator Rasmussen, Chair, Senate Agriculture and Rural Economic Development Committee
Senator Fraser, Chair, Senate Environmental Quality and Water Resources Committee
Senator Jacobsen, Chair, Senate Natural Resources, Parks, and Recreation Committee
Representatives Chandler and Linville, Co-Chairs, House Agriculture and Ecology Committee
Representatives Buck and Regala, Co-Chairs, House Natural Resources Committee